

Work Order ID 71318

Tuesday, June 28, 2011 10:04:58 AM

Page 2

Item ID: D3391-021

Accept

Setup Start

Work Order ID 71318

Tuesday, June 28, 2011 10:04:58 AM

Page 1

Item ID: D3391-021

Accept

Setup Start

Revision ID:

Item Name: Fwd Tube Assembly

Stop

Start Date: 6/28/2011 Start Qty: 1.00

Required Date: 7/28/2011 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Run Start

Approvals: Process Plan: *UMF*Date: *11-06-28* Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D3391

Rev H

100

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

Cut extrusion to 46.52 +0.010 -0.020

110

0.00



BENDING MACHINE- SKIDTUBES

CNC Bend-1

Memo

0.00

CNC Delta 100 Bender

Bend as per Dwg D3391 Using Bend Prog 3391021

120

0.00



QC5- Inspect part completeness to step on W/O

QC

Memo

0.00

Quality Control

*DD**11-6-28**DD**11-6-28**1 & BE 11/06/28*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

H:\FORMS\Quality Assurance\approved QAWCRWO RevE

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NOTE: Date & initial all entries

H:\FORMS\Quality Assurance\approved QAWCRWO RevE

Work Order ID 71318

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Item ID: D3391-021

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Setup Start



Revision ID:

Stop



Item Name: Fwd Tube Assembly

Start Date: 6/28/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 7/28/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

180

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Drill float bag holes as per Dwg D3391 using DT8798(Do not open tow cap holes to finish size)
(ONLY DRILL HOLES MARKED "A")

2-Drill Remaining two holes for tow cap using DT 8819 Locating off of .1875" holes drilled in previous step

SAD 11-06-30

3-Open tow cap holes to .208" as per Dwg D3391

4-Open Tow Ring hole to .640" as per Dwg D3391

5- open float bag holes 0.328" and counter sink as per-dwg D3391

Wh 11/06/30

6-Deburr & Scribe Batch number Inside aft end.

7-Transfer drill D3391-021 with D3391-023

DP 11-6-30

190

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

Sul 06/30

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Start Date: 6/28/2011 Start Qty: 1.00

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Required Date: 7/28/2011 Req'd Qty: 1.00

Customer:

Reference:

Run Start

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

200

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

SAO 11-06-30

210

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

DP

11-6-30

220

Skidtubes

0.00



Skidtubes

Memo

0.00

Skidtubes

1-instal spacers as per dwg D3391

A/R Magnabond 6398 batch: M46677

exp. date: 11/08

cure time 12hrs. as per QSI015

2- grind crossbolt flush

3-back drill crossbolt if necessary

DL 11/06/30
DL 11/07/04

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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

230

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

235

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

AND REALODINE AS PER PAR09-043

240

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

0.00

Powder Coating

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

11:15

320 °F

11:45

1 BL 11-7-11

IX M-L 11/07/05

M117745

W/O:		WORK ORDER CHANGES					
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[illegible]

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Accept

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Setup Start

...the ...

Stop

**Cust Item ID:**

1. The first step is to identify the problem or question that needs to be addressed. This involves understanding the context and the specific requirements of the task.

2. The second step is to gather relevant information and resources. This may involve researching existing solutions, consulting with experts, or collecting data.

3. The third step is to develop a plan or strategy to address the problem. This involves breaking down the problem into smaller, manageable tasks and determining the sequence of actions to be taken.

4. The fourth step is to implement the plan. This involves carrying out the tasks identified in the plan and monitoring progress as you go.

5. The fifth step is to evaluate the results. This involves comparing the actual outcomes with the expected outcomes and identifying any areas for improvement.

6. The sixth step is to communicate the findings. This involves sharing the results of the process with others who may be interested or affected by the outcomes.

7. The seventh step is to reflect on the process. This involves thinking about what worked well, what didn't, and how the process could be improved for future tasks.



Customer:

Reference:

Run Start

Stop

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____



**Insp.
Stamp**

0.00

Abstract

0.00

Quality Control

0.00

Memo

**** install D3591-1 spacer as per DSI9364 and wearplate and gasket as per DWG ****

0.00

0.00

Memo

Quality Control

0.00

Summary

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

Work Order ID 71318

Tuesday, June 28, 2011 10:04:58 AM



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Item ID: D3391-021

Accept



Setup Start



Revision ID:

Stop



Item Name: Fwd Tube Assembly

Start Date: 6/28/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 7/28/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursTool ID Tool # Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

260

Identify as per dwg & Stock Location: w/o

0.00

0412-742-043 / B71317



Packaging

Memo

0.00

Packaging

1 0 1107105

280

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11/7/09ME 11-07-06

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Picklist Print

Tuesday, June 28, 2011 10:04:55 AM

Page 1

Work Order ID: 71318

Parent Item: D3391-021

Parent Item Name: Fwd Tube Assembly



Start Date: 6/28/2011

Required Date: 7/28/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP A 05.09.13 New issue KJ/JLM
 IPP B 06.02.10 Dwg rev.D ecn 773 EC
 IPP C 06.05.02 Added inspections EC
 IPP D 07.03.13 rev F dwg EC
 IPP E 07.11.07 revG dwg ecn1053P EC verified by: DD
 IPP Rev:f ECN 1056 07-11-12 DD verified by: EC
 IPP Rev:G 08-09-08 new process (ecn 08-510) DD verified by:EC
 IPP Rev:H 08-09-10 revH as per dwg DD verified by:EC
 IPP Rev J 09.02.02 added hardware EC verified by: DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6013-047 Skidtube Material		Manufactured	No			100	Each	18.0000	1	1			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG		18							
				26547		18							
D3670-4-200 SPACER		Manufactured	No			220	Each	38.0000	4	4			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG		38							
				70822		38							
D3401-041 Tow Cap Assembly		Manufactured	No			255	Each	2.0000	1	1			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				FP007		2							
				61505		2							

① 11-6-28

u/06/30

u 11/07/05

x2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Parent Item: D3391-021



Parent Item Name: Fwd Tube Assembly

Start Date: 6/28/2011

Required Date: 7/28/2011



Start Qty: 1.00

Required Qty: 1.00

D3564-13	Manufactured	No	255	Each	16.0000	1	1
							<u>11/07/05</u>
Wearshoe							



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------



FP016	16	
<u>69280</u>	16	

D3566-13	Manufactured	No	255	Each	26.0000	1	1
							<u>11/07/05</u>
Gasket							

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP	24	
69281	24	
FP014	2	
<u>68341</u>	2	

AN960C10L	<u>NAS1149C0332</u>	Purchased	No	255	Each	0.0000	10	10
	<u>R</u>						<u>11/07/05</u>	
washer								

AN3C4A		Purchased	No	255	Each	2,162.000	10	10
							<u>11/07/05</u>	
BOLT								

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

ST350	2162	
117313	2	
117688	776	
117795	500	
117872	22	
118012	500	
<u>118112</u>	362	

Tuesday, June 28, 2011 10:04:55 AM

Shop Packet Print

Page 2

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Parent Item: D3391-021

Parent Item Name: Fwd Tube Assembly

Start Date: 6/28/2011

Required Date: 7/28/2011

Start Qty: 1.00

Required Qty: 1.00

D3672-1 Manufactured No

255

Each

1,122.000

4

4



Phenolic Washer



24

11/07/05

Location

Loc Qty

Loc Code

ST074

1096

64177

596

X4

66821

500

ST077

26

52505

26

AELS-1032-130 Purchased No

255

Each

0.0000

2

2



M117717



(x2) 24 11/07/05

INSERT

AELS-1032-225 Purchased No

255

Each

0.0000

10

10



M117717



(x10) 24 11/07/05

INSERT

Tuesday, June 28, 2011 10:04:56 AM

Shop Packet Print

Page 3

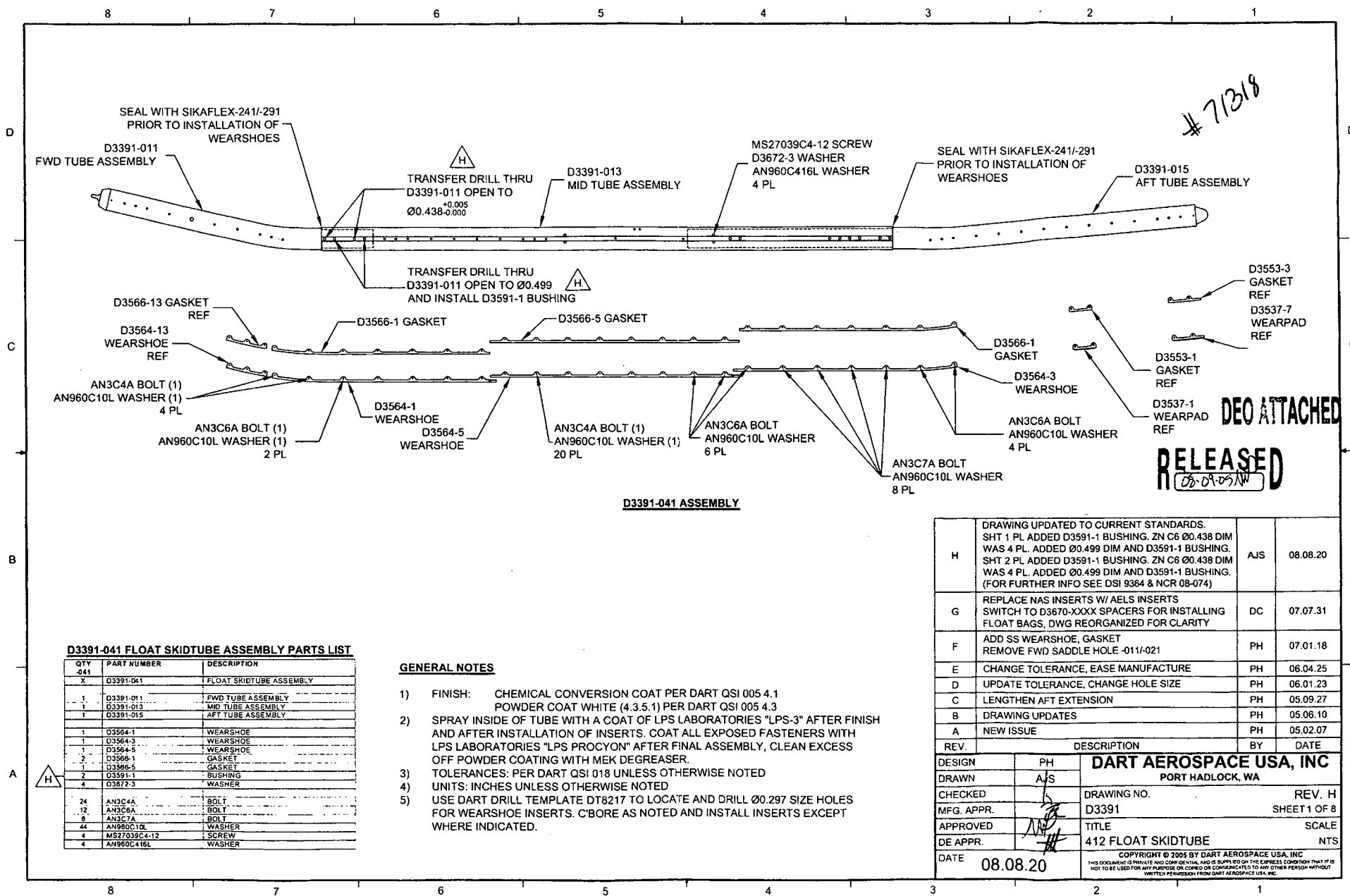
W/O:		WORK ORDER CHANGES					
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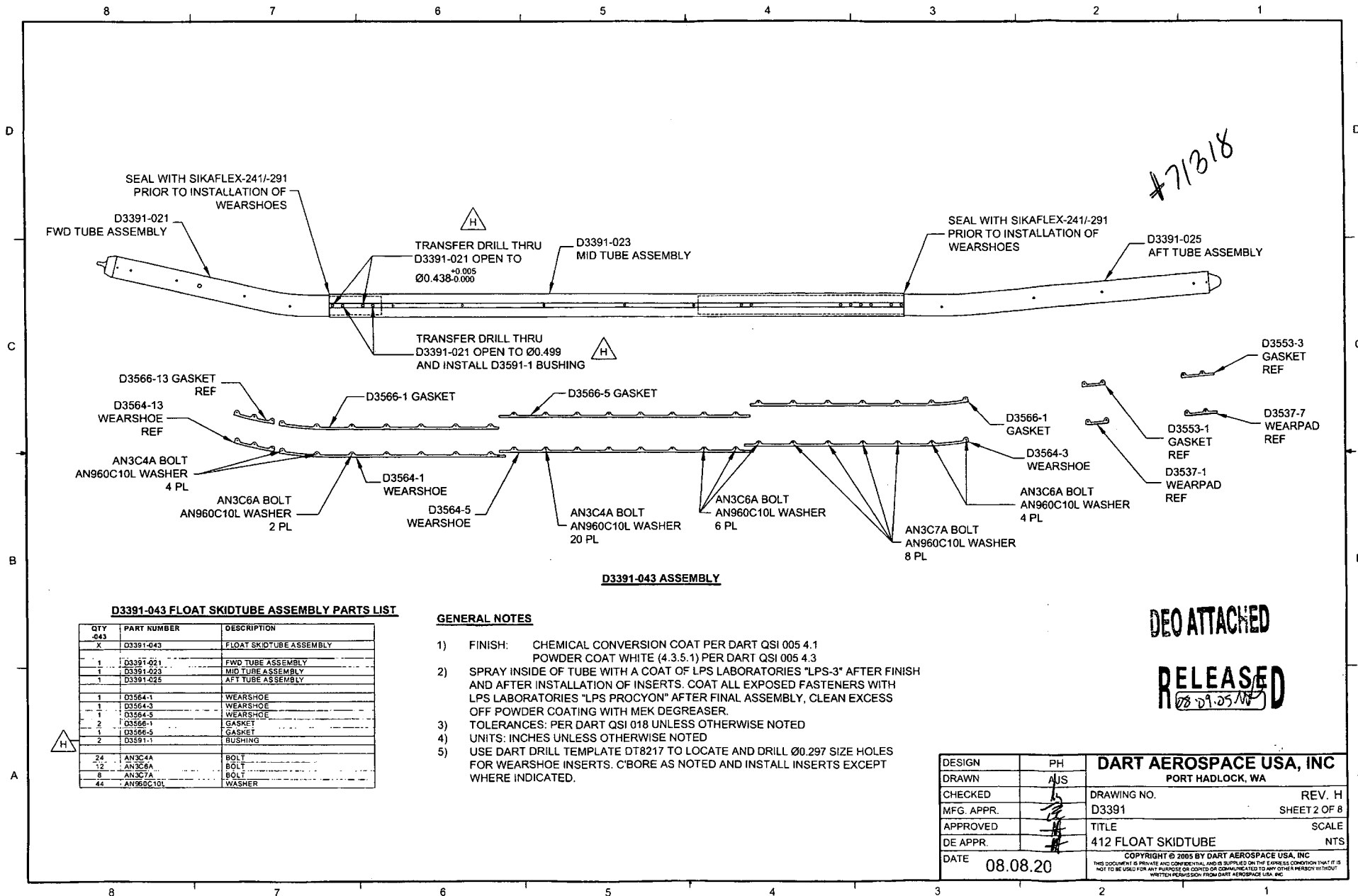
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

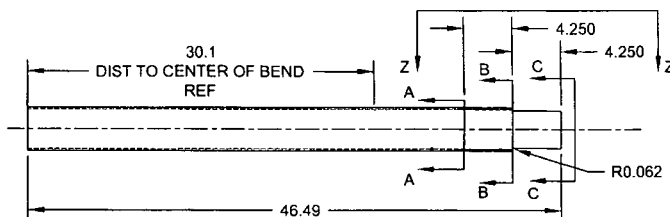
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

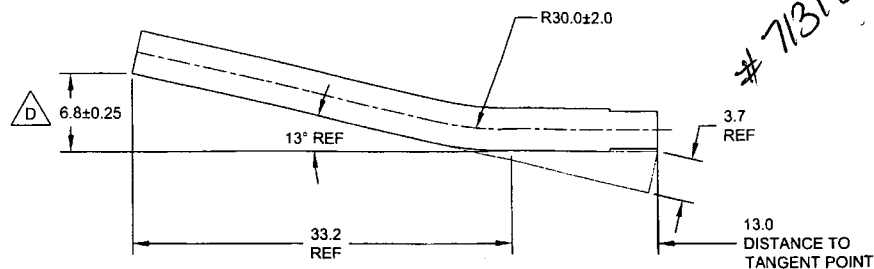
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NOTE: Date & initial all entries

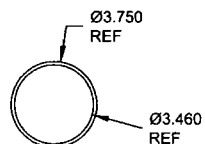




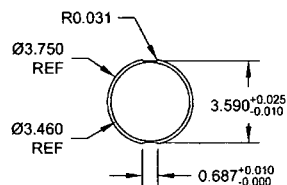
D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



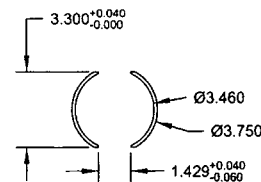
D3391-011/-021 BENDING DETAIL
(MAKE FROM D3391-1)



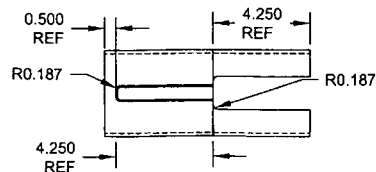
SECTION A-A
SCALE 2X



SECTION B-B
SCALE 2X



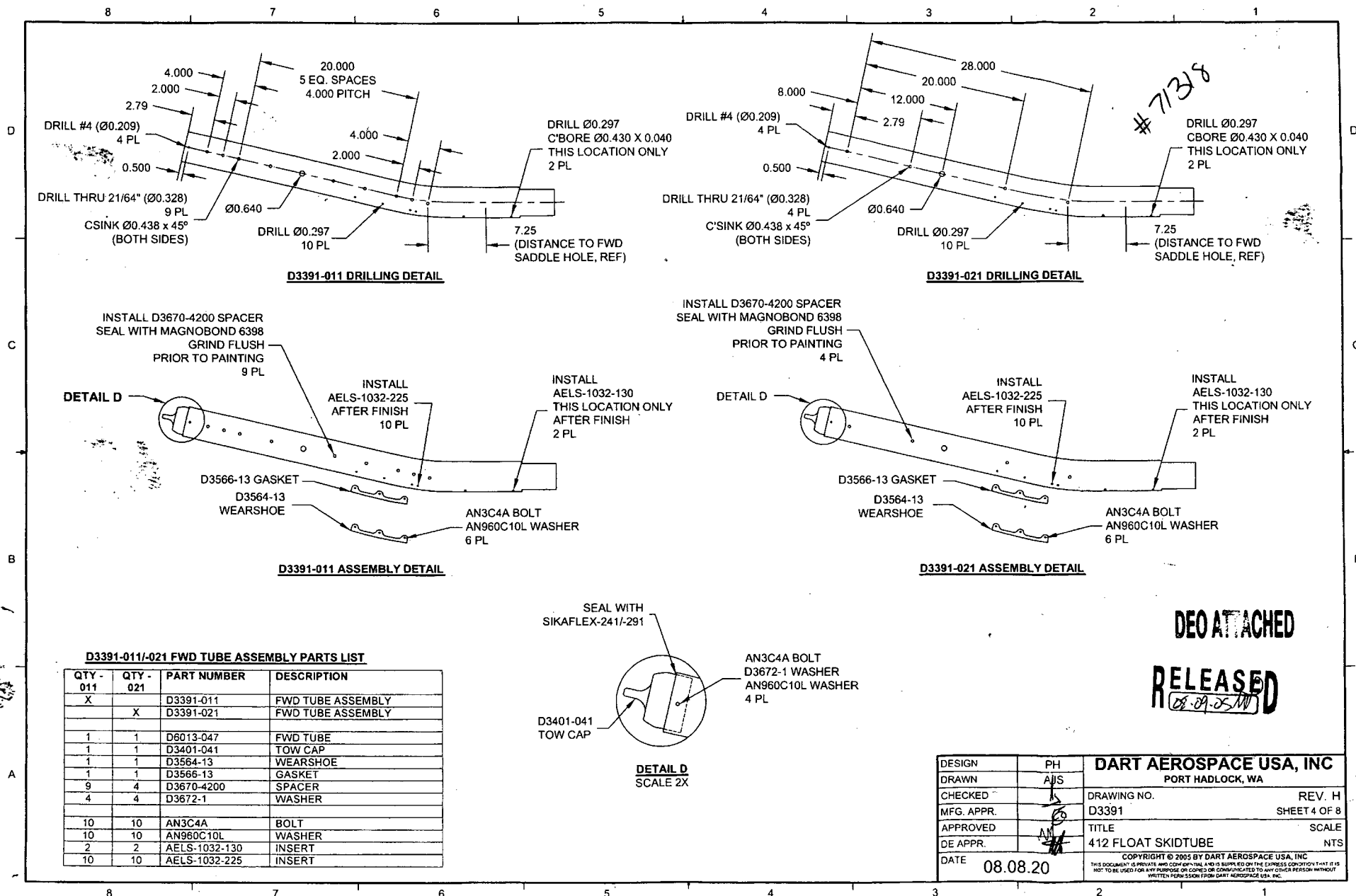
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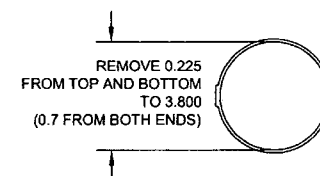
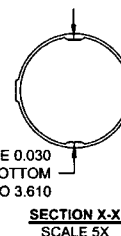
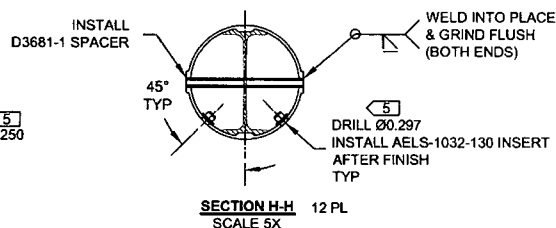
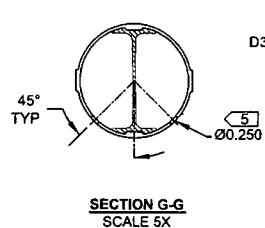
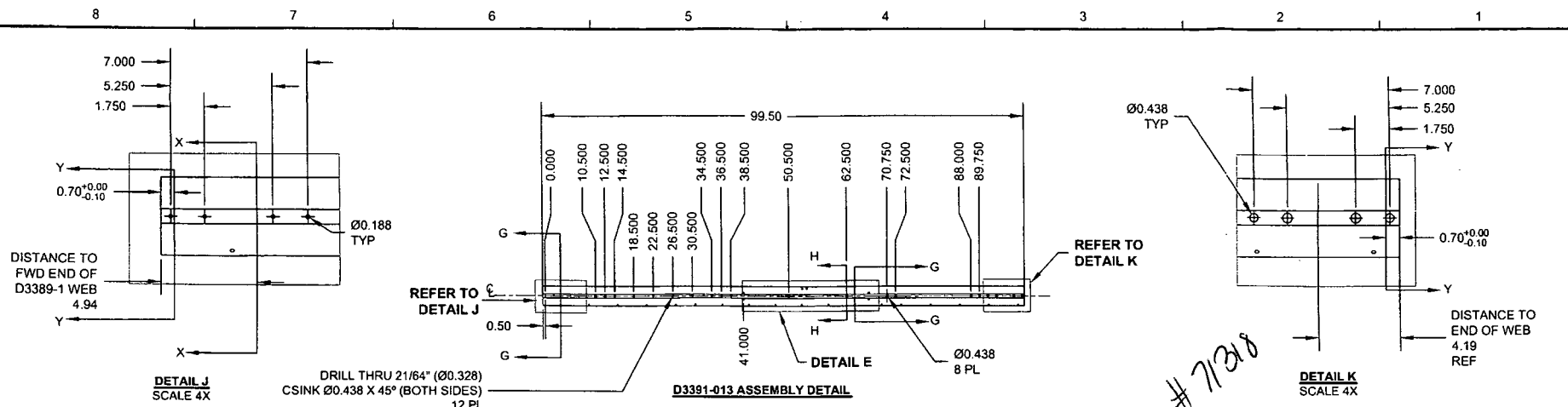


VIEW Z-Z
SCALE 2X

DEO ATTACHED
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8-8-05/W

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DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO. D3391	REV. H SHEET 3 OF 8
MFG. APPR.		TITLE	SCALE
APPROVED		412 FLOAT SKIDTUBE	NTS
DE APPR.		COPYRIGHT © 2005 BY DART AEROSPACE USA, INC	
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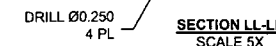
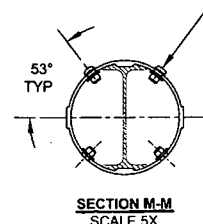
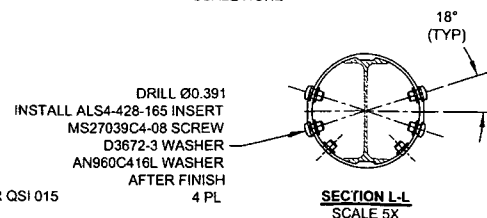
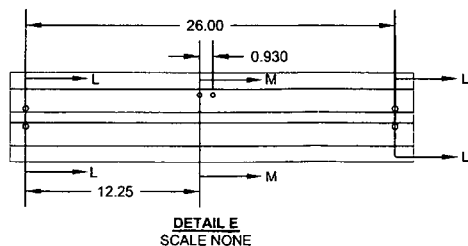


D3391-013 MID TUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
-013		
X	D3391-013	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
4	D3672-1	WASHER
4	D3672-3	WASHER
12	D3681-1	SPACER
24	AELS-1032-130	INSERT
4	ALS4-428-165	INSERT
4	AN960C10L	WASHER
4	AN960C416L	WASHER
4	MS27039C1-09	SCREW
4	MS27039C4-08	SCREW

D3391-013 MID TUBE ASSEMBLY

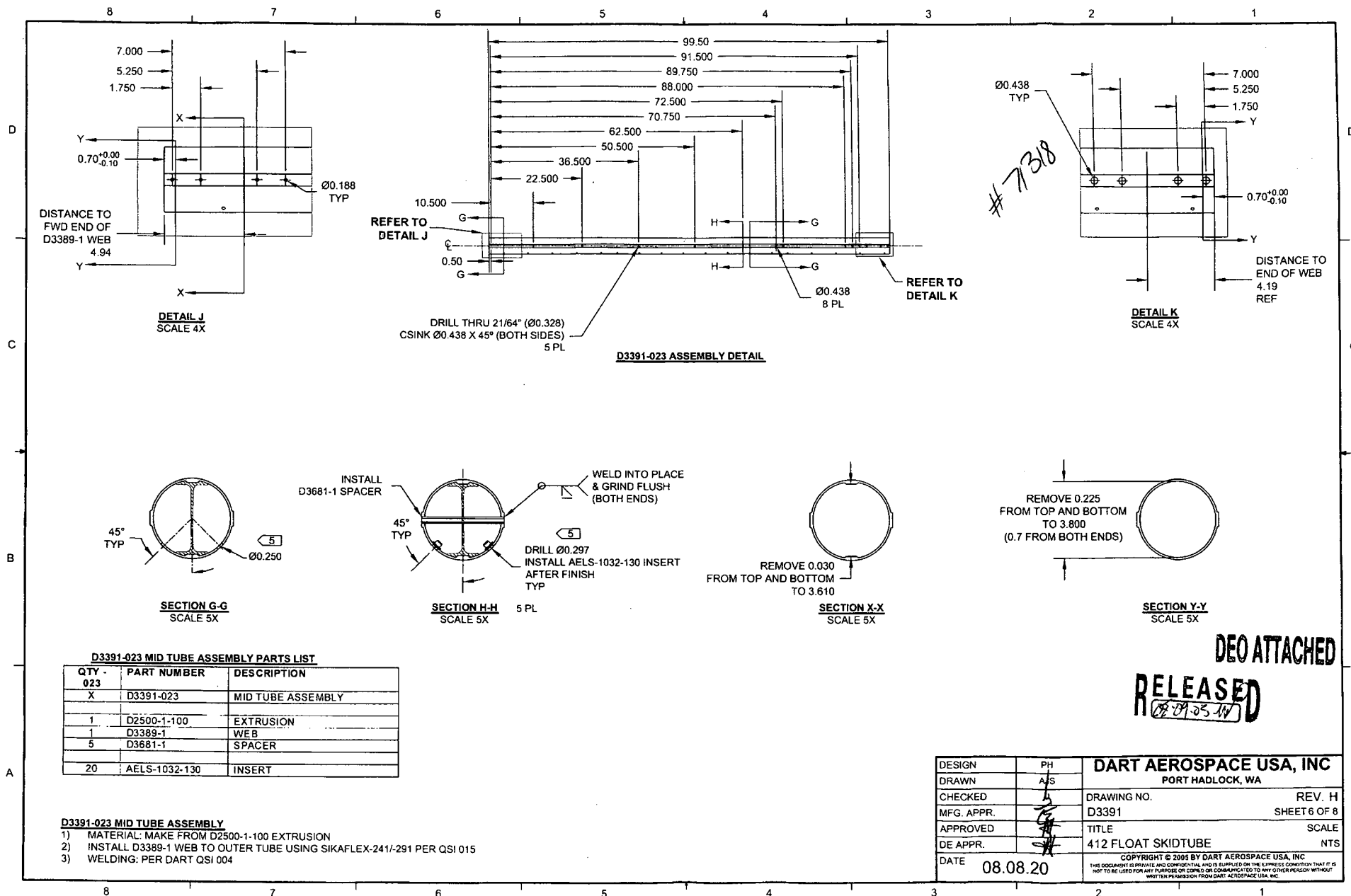
- MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-2411/291 PER QSI 015
- WELDING: PER DART QSI 004



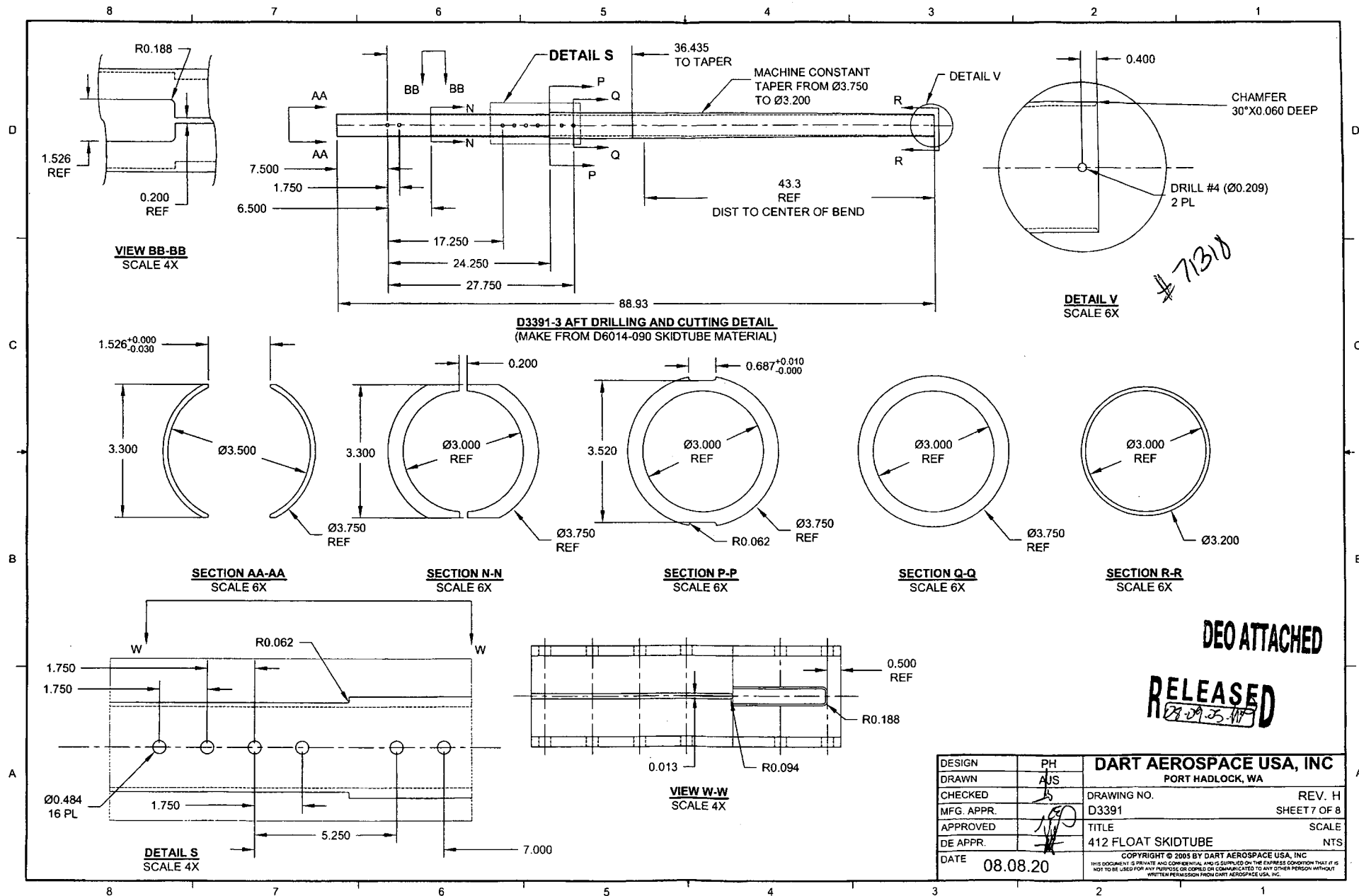
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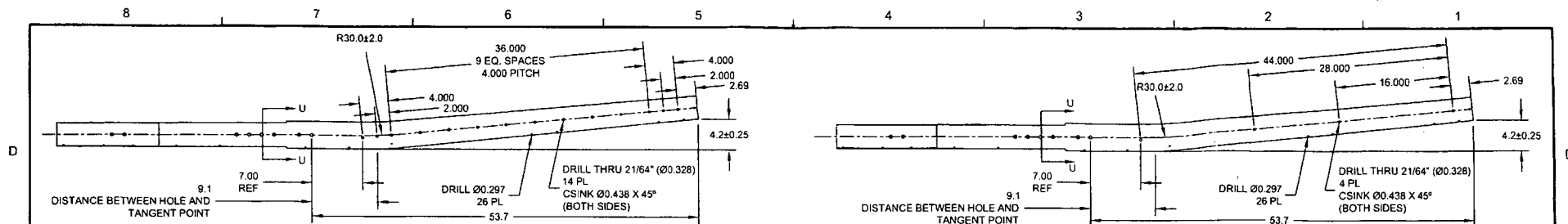
RELEASED

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MFG. APPR.		D3391	SHEETS OF 8
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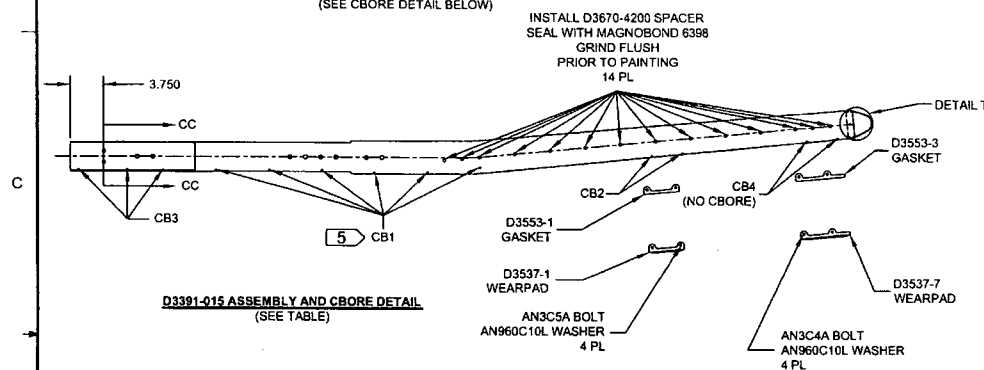
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 08-09-23-14



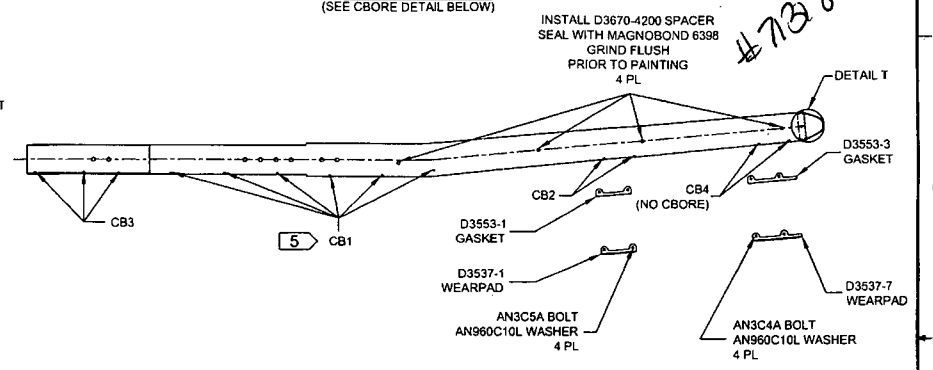


D3391-015 BENDING AND DRILLING DETAIL
(SEE CBORE DETAIL BELOW)

D3391-025 BENDING AND DRILLING DETAIL
(SEE CBORE DETAIL BELOW)



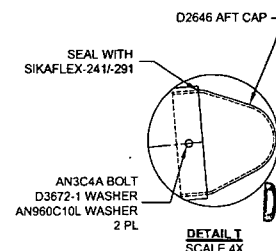
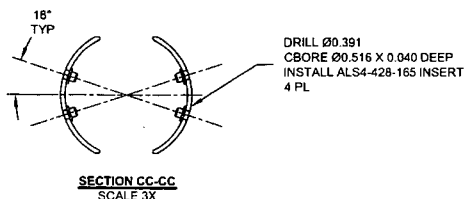
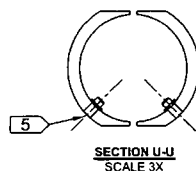
D3391-015 ASSEMBLY AND CBORE DETAIL
(SEE TABLE)



D3391-025 ASSEMBLY AND CBORE DETAIL
(SEE TABLE)

D3391-015/-025 AFT TUBE ASSEMBLY PARTS LIST

QTY - 015	QTY - 025	PART NUMBER	DESCRIPTION
X	X	D3391-015	AFT TUBE ASSEMBLY
		D3391-025	AFT TUBE ASSEMBLY
1	1	D6014-090	AFT TUBE
1	1	D2646	AFT CAP
1	1	D3537-1	WEARPAD
1	1	D3537-7	WEARPAD
1	1	D3553-1	GASKET
1	1	D3553-3	GASKET
14	4	D3670-4200	SPACER
2	2	D3672-1	WASHER
14	14	AELS-1032-130	INSERT
12	12	AELS-1032-225	INSERT
4		ALS4-428-165	INSERT
6	6	AN3C4A	BOLT
4	4	AN3C5A	BOLT
10	10	AN960C10L	WASHER



CBORE HOLES MARKED CB1-CB4 AS FOLLOWS AND
INSTALL AELS-1032-XXX AFTER FINISH AS NOTED

HOLES MARKED	QTY D3391-015	QTY D3391-025	CBORE	P/N
CB1	12	12	Ø0.430 X 0.170	AELS-1032-225
CB2	4	4	Ø0.430 X 0.170	AELS-1032-130
CB3	6	6	Ø0.430 X 0.040	AELS-1032-130
CB4	4	4	NONE	AELS-1032-130

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MFG. APPR.		D3391	SHEET 8 OF 8
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DE APPR.		412 FLOAT SKIDTUBE	NTS
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RELEASED
08-09-05/10

DRAWING NO. D3391	TITLE 412 FLOAT SKIDTUBE	REV. H	DART AEROSPACE USA, INC ENGINEERING ORDER		D.E.O. NO. D3391-H-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>CP</i>	CHECKED <i>h</i>	MFG. APPR. <i>MA</i>	APPROVED <i>MP</i>		DE APPR. <i>MP</i>		
DATE 09.09.23	DATE 09.09.24	DATE 09/09/25	DATE 09/09/30		DATE 09/09/30		

PURPOSE:

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF D3391-041/-043 SKIDTUBES.

CHANGE:

AMEND NOTE 2 OF D3391-041/-043 SKIDTUBE ASSEMBLIES (ZN A6-1, A6-2) AS FOLLOWS:

- 2) ~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH~~
~~AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH~~
LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS
OFF POWDER COATING WITH MEK DEGREASER.

RELEASED
2010-02-02

MP
#71318

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Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

